

Work Order ID 70478

Thursday, June 09, 2011 11:44:57 AM

Page 1

Item ID: D2893-1

Accept

Setup Start

Revision ID:

Stop

Item Name: 2.75 Support

Start Date: 6/9/2011 Start Qty: 20.00

Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan: CLDate: 11/06/09

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2893

Rev B

100

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Machine as per Folio FA081 Tumble & Deburr

22 11.7.2223

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

22 11.7.2223

120

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

23 11.07.22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.1.21	100	Second operation machines too deep into the part. .150" +/- .010 is at .125. (X1) R.C.: NO NOTE TO WFORM MACHINIST.	11.07.28 SS1042	* diameter offset entry in control. leave note for machinists in folio SCRAP PART	11.1.21		11.07.28	
11.7.28	100	2.985" dimension is under tol. by .004" [2.981]" R.C. most likely caused by tool wear (last two pieces ok)	11.07.28 SS1042	ACCEPTABLE DEVIATION. THIS W/O ONLY.	11.7.28		11.07.28	

NOTE: Date & initial all entries

Work Order ID 70478

Thursday, June 09, 2011 11:44:58 AM



Page 2

Item ID: D2893-1

Accept



Setup Start



Revision ID:

Stop



Item Name: 2.75 Support

Start Date: 6/9/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 20.00



Customer:

Reference:

Run Start






Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo Mask Inside Bore for Priming TIME: _____ □OVEN TEMPERATURE: _____ □FINISH	0.00 N/A 0.00							
140  QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							
150  SprayPaint Spray Painting	SprayPaint Memo Prime inside surface as per Dwg D2893 and QSI 005 4.3	0.00 0.00							

per ECN
11-614

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 70478

Thursday, June 09, 2011 11:44:58 AM



Page 3

Item ID: D2893-1

Accept



Setup Start



Revision ID:

Stop



Item Name: 2.75 Support

Start Date: 6/9/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC14- Inspect Spray Paint

0.00

QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: *to be changed* 0.00

0.00

Packaging

Memo

0.00

Packaging

RT 11-08-02

180



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

*CK 11/08/02**11-08-2*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, June 09, 2011 11:44:53 AM

Page 1

Work Order ID: 70478

Parent Item: D2893-1

Parent Item Name: 2.75 Support



Start Date: 6/9/2011

Required Date: 6/30/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP: C02.11.26 Reformat; Added P/O KJ
 IPP D 06.04.19 removed alodine EC
 IPP Rev:E Added priming as per Rev B 07-04-30 JLM
 IPP F 08.03.19 Re-format EC verified by: DD
 IPP Rev:G 08-05-15 add QC14 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK078		Manufactured	No			100	Each	6.0000	0.5	10			



D2893-1 TURNING DETAIL



DR 11.7.22

Location

MAT060

69591

20242

Loc Qty

6

6

9

Loc Code

5 (10 pcs)
 7 (14 pcs)

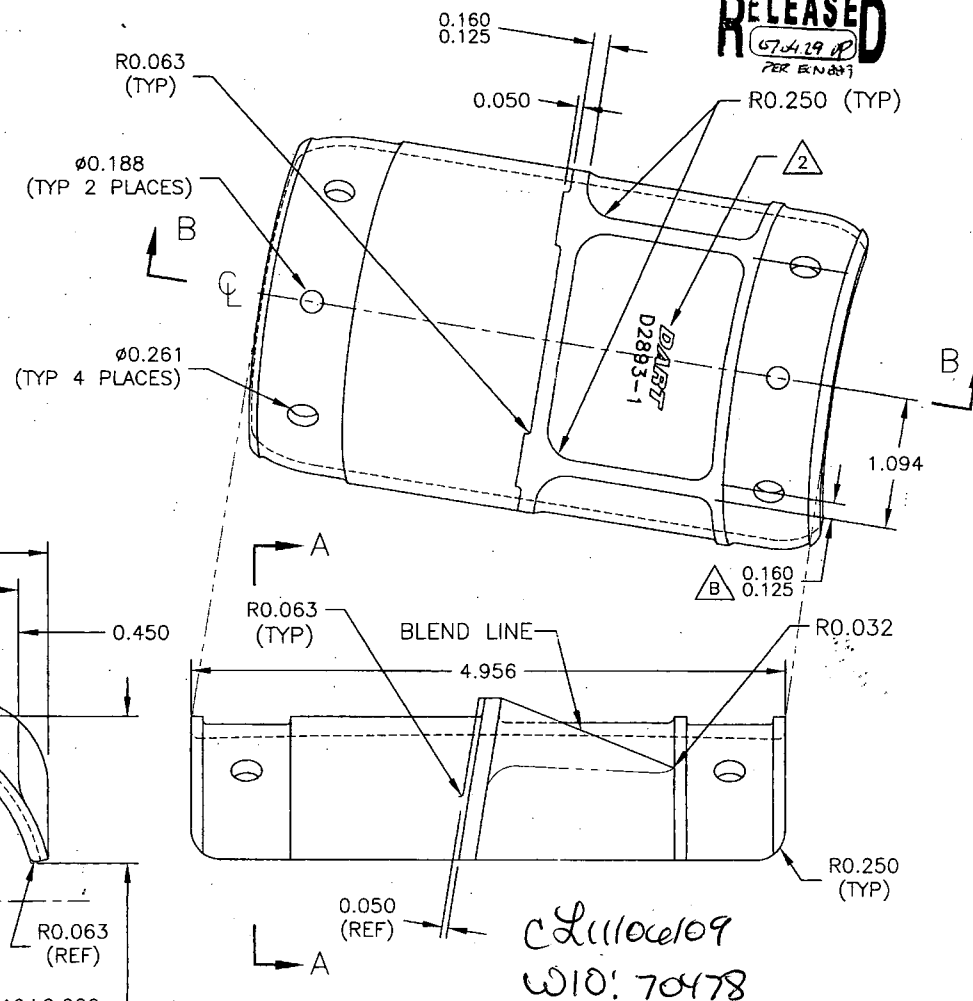
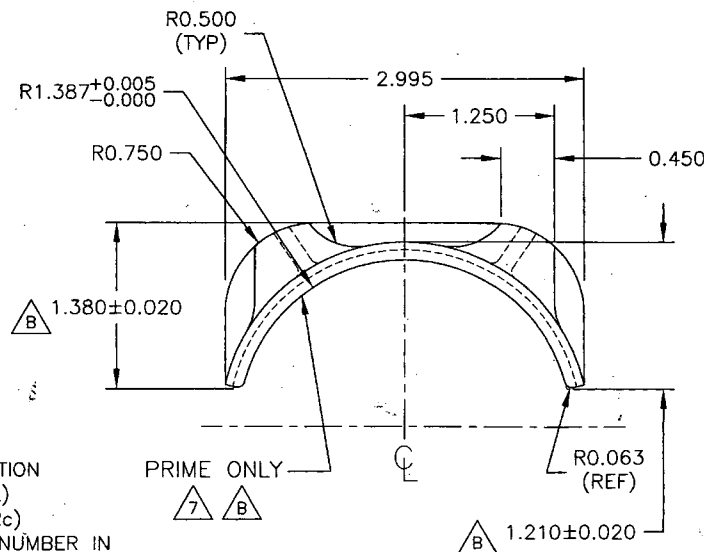
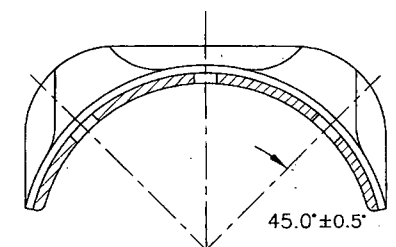
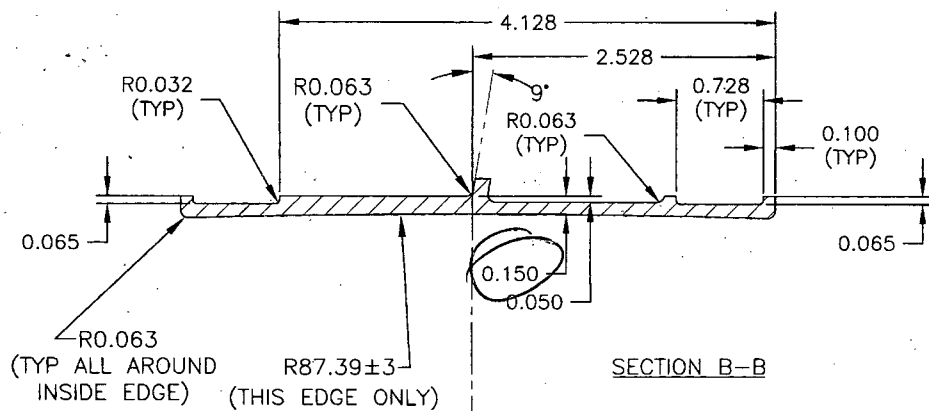
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2893-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL
HEAT TREAT TO H900 CONDITION
(900°F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRc)
- 2) IDENTIFY WITH DART LOGO AND PART NUMBER IN
THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

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THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.

B	07.03.16	UPDATE DIMS AS MFG., PRIME INSIDE
A	01.01.10	NEW ISSUE
DESIGN	9P	DRAWN BY PH
CHECKED	TH	APPROVED
DATE	07.03.16	TITLE
		02.750 SUPPORT

DART DART AEROSPACE LTD.
MARKHAM, ONTARIO, CANADA

DRAWING NO. D2893
SHEET 1 OF 1

SCALE
1:1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	70478
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.988	2.988	2.990	2.990	2.990
AB	0.440	0.460		.450	.450	.455	.455	.455
AC	0.125	0.160		.155	.157	.157	.157	.157
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.144	.145	.144	.144	.144
AG	0.140	0.160		.150	.145	.148	.148	.148
AH	1.360	1.400		1.367	1.365	1.367	1.367	1.367
AI	0.040	0.060		.053	.045	.053	.053	.053
AJ	1.190	1.230		1.214	1.206	1.212	1.212	1.212
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

Measured by: <i>RD</i>	Date: 11.7.26
Audited by: <i>[Signature]</i> 11.07.29	Date:
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	<i>[Signature]</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DART AEROSPACE LTD		Work Order:	70478
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B	Page 1 of 1	

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HAAS Section								
AA	2.985	3.005		2.987	2.988	2.988	2.985	2.985
AB	0.440	0.460		.455	.455	.455	.455	.455
AC	0.125	0.160		.160	.158	.154	.154	.154
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.144	.144	.146	.146	.146
AG	0.140	0.160		.148	.148	.146	.146	.146
AH	1.360	1.400		1.371	1.369	1.376	1.376	1.376
AI	0.040	0.060		.049	.050	.054	.050	.050
AJ	1.190	1.230		1.214	1.212	1.223	1.212	1.212
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.31	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

Measured by: <i>RP</i>	Date: 11.7.26
Audited by: <i>[Signature]</i>	Date:
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	<i>[Signature]</i>

DART AEROSPACE LTD		Work Order:	70478
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

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Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.986	2.987	2.985	2.985	2.986
AB	0.440	0.460		.455	.455	.455	.455	.455
AC	0.125	0.160		.156	.156	.156	.157	.158
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.142	.142	.146	.144	.145
AG	0.140	0.160		.146	.145	.146	.147	.146
AH	1.360	1.400		1.371	1.371	1.375	1.372	1.372
AI	0.040	0.060		.055	.055	.055	.053	.051
AJ	1.190	1.230		1.217	1.221	1.224	1.221	1.220
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.260	.260	.260	.260	.260
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

2.983
.455
.156
.050
.188
.144
.149
1.371
.055
1.220
.010
.063
.250
2.528
87.39
.260
.063

Measured by: <u>RR</u>	Date: <u>11.7.26</u>
Audited by: <u>[Signature]</u>	Date: <u>11.07.28</u>
Prototype Approval: <u></u>	Date: <u></u>

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
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AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.142	.146	.144	.144	.146
AG	0.140	0.160		.147	.147	.150	.147	.150
AH	1.360	1.400		1.371	1.372	1.370	1.372	1.373
AI	0.040	0.060		.056	.053	.053	.054	.052
AJ	1.190	1.230		1.219	1.219	1.219	1.221	1.219
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.260	.260	.260	.260	.260
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.260	.260	.260	.260	.260
AQ	0.053	0.073		.063	.063	.063	.063	.063
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